

## GrafiCalc 2009 FAQ

### **Question: What is GrafiCalc exactly?**

GrafiCalc is self-contained calculation and analysis package that allows users to conceptualize, analyze, optimize, and solve a wide range of design and engineering challenges with unprecedented ease, speed, and accuracy.

GrafiCalc is a standalone self-contained tool. Yet, GrafiCalc is compatible with all popular CAD applications. Plus, as a "Designed for Windows" standard application, GrafiCalc allows users to access all the benefits of standard Office and Internet applications, to communicate design ideas and results with all members of the design group, quickly and cost effectively.

### **Question: How does GrafiCalc work?**

GrafiCalc virtually eliminates arithmetic, trigonometry, algebra, equation solving, hand held calculators, as well as tedious physical prototyping methods conventionally applied for solving geometry dependent design and engineering challenges. Instead, GrafiCalc offers groundbreaking technology that allows users to work with geometry in the same way as conventional spreadsheets work with numbers, to simulate and solve design and engineering challenges while making informed decisions.

With GrafiCalc users can capture the functional intents of a design challenge by associating constrained geometry and "smart" calculations in a single worksheet. Initial geometry can be entered directly in GrafiCalc or imported from any standard CAD package via the built-in 2-way DXF translator. GrafiCalc includes an automatic constraint inference facility, which enable users to snap automatically to center, endpoints, tangents, centroid, and on-geometry automatically. Lines snap automatically to horizontal and vertical.

Eighty-eight built-in calculation functions are included to perform automated geometry associative algebraic, binary, control, geometrical, logical, mathematical, statistical, and trigonometric calculations. Which means, as the geometry changes the associative calculations are updated interactively.

Conversely, GrafiCalc incorporates industry-first geometry Goalseek facility that makes it possible to start by specifying measured and calculated values as design goals and have the computer "backsolve" geometry to meet the exact goal, automatically.

GrafiCalc also includes the world's first programmable geometrical calculator. To date, all calculators in the world accept only alphanumerical inputs. In GrafiCalc programmable calculation facility you can directly include geometry and dimensions that are linked to the worksheet in calculation statements. Multiple calculation programs can be linked together to create powerful problem solving platforms. This facility enables users to create validated libraries of calculations that can be reused and shared with other members of the design team.

Best of all, in several situations, GrafiCalc enables the engineer to solve design challenges without performing any calculations. Simply constrain geometry and attach "smart" measurements to obtain instantaneous answers!

### **Question: Who should use GrafiCalc?**

GrafiCalc can help any engineer who is performing geometry dependent calculations and making geometry dependant design and engineering decisions. To date, GrafiCalc is being used by thousands of mechanical, civil, structural, and industrial engineers world wide for solving hundreds of different types of design challenges.

**Question: What can GrafiCalc do?**

GrafiCalc has been applied to solve a wide range of engineering challenges - following is partial list of proven GrafiCalc applications:

Beam calculations	Bearing calculations
Belt and Conveyor calculations	Boat Profile calculations
Composites calculations	Centroid calculations
Force diagram analysis	Forging calculations
Heat Transfer calculations	Hydraulics calculations
Layout Analysis	Load Distribution calculations
Leveraging Excel calculations	Lighting design
Magnetic Calculations	Masonry bridge Stress calculations
Material Selection calculations	Mechatronic calculations
Optics layout analysis	Paper machinery calculations
Pump Calculations	Pressure vessel calculations
Shaft optimization	Shape Dependent Calculations
Stress, Strain, Deflection calculations	Structural Engineering Calculations
Valve calculations	Volume Calculations
Wiring Aperture	Weld Calculations

**Question: What do I need to run GrafiCalc?**

System requirement: Any personal computer running Windows 95, 98, NT, XP. The compact program size of less than 1 MB insures ultra-fast responses, even from a minimal system.

Disk requirement: < 2 MB!

**Question: How long does it take to learn GrafiCalc?**

Engineers familiar with CAD and conventional numerical spreadsheets can understand GrafiCalc principle of operations in less than an hour. GrafiCalc ships with tutorials, examples, and video training modules to make users familiar with all aspects of the software quickly and easily.

**Question: What about support and maintenance?**

Technical support via the web and maintenance of GrafiCalc is included in the price.